

032301.230.seq.ST25.txt
SEQUENCE LISTING

<110> Farwick, Mike
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<170> PatentIn version 3.1
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DEC 18 2001
PATENT & TRADEMARK OFFICE
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atc atc gat cac ctc gaa aag ggc tcc ctg gat atc tcc gga ctg cgc Ile Ile Asp His Leu Glu Lys Gly Ser Leu Asp Ile Ser Gly Leu Arg 125 130 135	675
ttc ctc gtg ctc gat gaa gca gac gag atg ctg aac atg ggc ttc cag Phe Leu Val Leu Asp Glu Ala Asp Glu Met Leu Asn Met Gly Phe Gln 140 145 150 155	723
gaa gat gtc gag cgc atc ctc gag gac acc cca gac gag aag cag gtt Glu Asp Val Glu Arg Ile Leu Glu Asp Thr Pro Asp Glu Lys Gln Val 160 165 170	771
gca cta ttc tcc gca acg atg cca aac ggc att cgt cgc ctg tcc aag Ala Leu Phe Ser Ala Thr Met Pro Asn Gly Ile Arg Arg Leu Ser Lys 175 180 185	819
cag tac ctg aac aac cct got gaa atc acc gtt aag tcc gag acc agg Gln Tyr Leu Asn Asn Pro Ala Glu Ile Thr Val Lys Ser Glu Thr Arg 190 195 200	867
act aac acc aac atc acc cag cgc ttc ctc aac gtt gca cac cgc aac Thr Asn Thr Asn Ile Thr Gln Arg Phe Leu Asn Val Ala His Arg Asn 205 210 215	915
aag atg gat gca ctg acc cgt att ctc gag gtc acc gag ttt gaa gca Lys Met Asp Ala Leu Thr Arg Ile Leu Glu Val Thr Glu Phe Glu Ala 220 225 230 235	963
atg atc atg ttc gtg cgc acc aag cac gaa act gaa gaa gtt gct gaa Met Ile Met Phe Val Arg Thr Lys His Glu Thr Glu Glu Val Ala Glu 240 245 250	1011
aag ctc cgt gca cgc gga ttc tcc gca gca gcc atc aac ggc gac att Lys Leu Arg Ala Arg Gly Phe Ser Ala Ala Ala Ile Asn Gly Asp Ile 255 260 265	1059
gct cag gca cag cgt gag cgc acc gtc gac cag ctg aag gac ggc cgc Ala Gln Ala Gln Arg Glu Arg Thr Val Asp Gln Leu Lys Asp Gly Arg 270 275 280	1107
ctg gac atc ctc gtt gca acc gac gtt gca gcc cgt ggt ctt gac gtt Leu Asp Ile Leu Val Ala Thr Asp Val Ala Ala Arg Gly Leu Asp Val 285 290 295	1155
gag cgc atc tcc cac gtg ctt aac ttc gac att cca aac gac acc gag Glu Arg Ile Ser His Val Leu Asn Phe Asp Ile Pro Asn Asp Thr Glu 300 305 310 315	1203
tcc tac gtt cac cgc atc ggc cgc acc ggc cgt gca gga cgt acc ggc Ser Tyr Val His Arg Ile Gly Arg Thr Gly Arg Ala Gly Arg Thr Gly 320 325 330	1251
gag gca atc ctg ttc gtg acc cca cgt gag cgt cgt atg ctt cgc tcc Glu Ala Ile Leu Phe Val Thr Pro Arg Glu Arg Arg Met Leu Arg Ser	1299

335

340

345

atc gag cgc gca acc aac gca cca ctg cac gaa atg gaa ctg cca acc Ile Glu Arg Ala Thr Asn Ala Pro Leu His Glu Met Glu Leu Pro Thr 350 355 360	1347
gtc gat cag gtc aac gac ttc cgc aag gtc aag ttc gct gac tcc atc Val Asp Gln Val Asn Asp Phe Arg Lys Val Lys Phe Ala Asp Ser Ile 365 370 375	1395
acc aag tcc ctc gag gac aag cag atg gac ctg ttc cgc acc ctg gtc Thr Lys Ser Leu Glu Asp Lys Gln Met Asp Leu Phe Arg Thr Leu Val 380 385 390 395	1443
aag gaa tac tcc cag gcc aac gac gtt cct cta gag gac atc gca gcg Lys Glu Tyr Ser Gln Ala Asn Asp Val Pro Leu Glu Asp Ile Ala Ala 400 405 410	1491
gca ctg gca acc cag gca cag tcc ggc gac ttc ctg ctc aag gag ctc Ala Leu Ala Thr Gln Ala Gln Ser Gly Asp Phe Leu Leu Lys Glu Leu 415 420 425	1539
cca cca gag cgc cgt gag cgc aac gac cgc cgt cgt gac cgt gac ttc Pro Pro Glu Arg Arg Glu Arg Asn Asp Arg Arg Arg Asp Arg Asp Phe 430 435 440	1587
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gat cgt ggc tca cgc ttc gac cgc gac gag aac ctg gca acc tac Asp Arg Gly Ser Arg Phe Asp Arg Asp Asp Glu Asn Leu Ala Thr Tyr 460 465 470 475	1683
cgc ctc gca gtg ggc aag cgc cag cac atc cgc cca ggc gca atc gtt Arg Leu Ala Val Gly Lys Arg Gln His Ile Arg Pro Gly Ala Ile Val 480 485 490	1731
ggg gca ctt gcc aac gaa ggt ggc ctg aac tcc aag gac ttc ggc cgc Gly Ala Leu Ala Asn Glu Gly Leu Asn Ser Lys Asp Phe Gly Arg 495 500 505	1779
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cca cag agc gtt ctt gac aac ctg cgc gac acc cgc atc tcc ggc cag Pro Gln Ser Val Leu Asp Asn Leu Arg Asp Thr Arg Ile Ser Gly Gln 525 530 535	1875
ctc atc aac ata gaa cgc gac tcc ggt gga cgc cca cca cgc cgc ttc Leu Ile Asn Ile Glu Arg Asp Ser Gly Gly Arg Pro Pro Arg Arg Phe 540 545 550 555	1923
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ggt ttc cgc ggt gga cgt gac cgt gat gat cgt ggc gga cgc ggt gga	2067	
Gly Phe Arg Gly Gly Arg Asp Arg Asp Arg Gly Gly Arg Gly Gly		
590	595	600

ttc cgc gga cgc gac gac cgc gga gac cgt ggt ggc cgt ggc ggt tac	2115	
Phe Arg Gly Arg Asp Asp Arg Gly Asp Arg Gly Gly Arg Gly Tyr		
605	610	615

cgt ggc gga cgc gac taagagttcg ttttagcttc agctcagggtt ttccgcctgag	2170
Arg Gly Gly Arg Asp	
620	

tctggtgctt agctagaaaa atccgttgct ctctctttac tgagagggca acggatttt	2230
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<213> Corynebacterium glutamicum

<400> 2

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Asp Val Val Gly Leu Ala Gln Thr Gly Thr Gly Lys Thr Ala Ala Phe		
35	40	45

Ala Leu Pro Ile Leu Ala Arg Ile Asp Lys Ser Val Arg Ser Pro Gln		
50	55	60

Ala Leu Val Leu Ala Pro Thr Arg Glu Gln Ala Leu Gln Val Ala Asp			
65	70	75	80

Ser Phe Gln Ser Phe Ala Asp His Val Gly Gly Leu Asn Val Leu Pro		
85	90	95

Ile Tyr Gly Gly Gln Ala Tyr Gly Ile Gln Leu Ser Gly Leu Arg Arg		
100	105	110

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Gly Ala His Ile Val Val Gly Thr Pro Gly Arg Ile Ile Asp His Leu
115 120 125

Glu Lys Gly Ser Leu Asp Ile Ser Gly Leu Arg Phe Leu Val Leu Asp
130 135 140

Glu Ala Asp Glu Met Leu Asn Met Gly Phe Gln Glu Asp Val Glu Arg
145 150 155 160

Ile Leu Glu Asp Thr Pro Asp Glu Lys Gln Val Ala Leu Phe Ser Ala
165 170 175

Thr Met Pro Asn Gly Ile Arg Arg Leu Ser Lys Gln Tyr Leu Asn Asn
180 185 190

Pro Ala Glu Ile Thr Val Lys Ser Glu Thr Arg Thr Asn Thr Asn Ile
195 200 205

Thr Gln Arg Phe Leu Asn Val Ala His Arg Asn Lys Met Asp Ala Leu
210 215 220

Thr Arg Ile Leu Glu Val Thr Glu Phe Glu Ala Met Ile Met Phe Val
225 230 235 240

Arg Thr Lys His Glu Thr Glu Glu Val Ala Glu Lys Leu Arg Ala Arg
245 250 255

Gly Phe Ser Ala Ala Ala Ile Asn Gly Asp Ile Ala Gln Ala Gln Arg
260 265 270

Glu Arg Thr Val Asp Gln Leu Lys Asp Gly Arg Leu Asp Ile Leu Val
275 280 285

Ala Thr Asp Val Ala Ala Arg Gly Leu Asp Val Glu Arg Ile Ser His
290 295 300

Val Leu Asn Phe Asp Ile Pro Asn Asp Thr Glu Ser Tyr Val His Arg
305 310 315 320

Ile Gly Arg Thr Gly Arg Ala Gly Arg Thr Gly Glu Ala Ile Leu Phe
325 330 335

Val Thr Pro Arg Glu Arg Arg Met Leu Arg Ser Ile Glu Arg Ala Thr
340 345 350

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Asn Ala Pro Leu His Glu Met Glu Leu Pro Thr Val Asp Gln Val Asn
355 360 365

Asp Phe Arg Lys Val Lys Phe Ala Asp Ser Ile Thr Lys Ser Leu Glu
370 375 380

Asp Lys Gln Met Asp Leu Phe Arg Thr Leu Val Lys Glu Tyr Ser Gln
385 390 395 400

Ala Asn Asp Val Pro Leu Glu Asp Ile Ala Ala Ala Leu Ala Thr Gln
405 410 415

Ala Gln Ser Gly Asp Phe Leu Leu Lys Glu Leu Pro Pro Glu Arg Arg
420 425 430

Glu Arg Asn Asp Arg Arg Arg Asp Arg Asp Phe Asp Asp Arg Gly Gly
435 440 445

Arg Gly Arg Asp Arg Asp Arg Gly Asp Arg Gly Asp Arg Gly Ser Arg
450 455 460

Phe Asp Arg Asp Asp Glu Asn Leu Ala Thr Tyr Arg Leu Ala Val Gly
465 470 475 480

Lys Arg Gln His Ile Arg Pro Gly Ala Ile Val Gly Ala Leu Ala Asn
485 490 495

Glu Gly Gly Leu Asn Ser Lys Asp Phe Gly Arg Ile Thr Ile Ala Ala
500 505 510

Asp His Thr Leu Val Glu Leu Pro Lys Asp Leu Pro Gln Ser Val Leu
515 520 525

Asp Asn Leu Arg Asp Thr Arg Ile Ser Gly Gln Leu Ile Asn Ile Glu
530 535 540

Arg Asp Ser Gly Gly Arg Pro Pro Arg Arg Phe Glu Arg Asp Asp Arg
545 550 555 560

Gly Gly Arg Gly Gly Phe Arg Gly Asp Arg Asp Asp Arg Gly Gly Arg
565 570 575

Gly Arg Asp Arg Asp Asp Arg Gly Ser Arg Gly Gly Phe Arg Gly Gly
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Asp Arg Gly Asp Arg Gly Gly Arg Gly Gly Tyr Arg Gly Gly Arg Asp
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